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JOHN C. GORECKI, ESQ. P.O BOX 553 CARLISLE, MA 01741			EXAMINER CHEA, PHILIP J	
			ART UNIT 2153	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

john@gorecki.us

Office Action Summary

Application No.

10/678,705

Applicant(s)

DURAIRAJ ET AL.

Examiner

Philip J. Chea

Art Unit

2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-22 have been examined.

Claim Objections

1. Claim 16 is objected to because of the following informalities: The acronym MIB should be spelled out before using it (i.e. Management Information Base (MIB)). Appropriate correction is required.
2. Claims 21-22 are objected to because of the following informalities: Note claims 21 and 22 refer to "the method of claim 14", where claim 14 is not a method claim, but rather an "intelligent management interface". Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11-17,21-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. It appears as if the claims are merely directed to software per se.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4,6,8-17,21, and 22 provides for the use of enabling, operating, performing, uploading, causing, controlling, implementing, and upgrading, but, since the claim does not set forth any steps

involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced. The "configure to" language does not positively recite the enabling, operating, performing, uploading, causing, controlling, implementing, and upgrading steps. The Examiner suggests removing the "configure to" language and positively recite the enabling, operating, performing, uploading, causing, controlling, implementing, and upgrading steps, for example, such as, "the intelligence enables ..." rather than "the intelligence is configured to enable..." or "control logic enabling..." rather than "control logic configured to enable...", etc.

Claims 4-17, 21, and 22 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

6. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 17 recites the limitation "the exterior interface" in line 3. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 21 recites the limitation "the existing software" in line 3. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 22 recites the limitation "the existing software" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Any claim not specifically mentioned is rejected by virtue of being dependent on a rejected claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 11-15,17-19,21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Largman et al. (US 7,137,034), herein referred to as Largman.

As per claim 11, Largman discloses an intelligent management interface for a network element, as claimed, comprising:

an independent operating environment enabling the intelligent management interface to be active during a boot process of the network element (see column 5, lines 39-55, *describing how an intelligent interface can be active during a boot process of computer [1] (i.e. a computer connected to the network (see column 8, lines 53-54) is considered the network element) by switching which drive the computer boots from automatically repairing the boot drive of the computer)*; and

intelligence enabling the intelligent management interface to take actions on the network element (see column 5, lines 56-63, *where the action taking place is a template drive repairing the boot drive of computer [1]*).

As per claim 12, Largman further discloses that the intelligence performs diagnostic checks on the network element (see column 6, lines 39-43).

As per claim 13, Largman further discloses that the intelligence uploads files to the network element (see column 5, lines 56-63, *where the files uploaded include a new operating system, and application files being uploaded to the computer (i.e. network element)*).

As per claim 14, Largman further discloses that the intelligence causes a new software image to be stored on the intelligent management interface, and to cause the network element to be restarted from the new software image (see column 27, lines 34-37 and lines 54-60, *describing how the master template can be updated (i.e. the data store used by the intelligent management interface for repairs) where the*

master template provides the data store template [14] with the copy that is used to repair data store [12] during a reboot of the network element see column 5, lines 45-63).

As per claim 15, Largman further discloses that the intelligence controls the network element before, during, and after a network element boot process (see column 5, lines 45-56).

As per claim 17, Largman further discloses that the intelligence implements a Universal Serial Bus (USB) stack to enable the intelligent management interface to communication over an exterior interface utilizing at least one of the USB standards (see column 19, lines 6-10).

As per claim 18, Largman further discloses a method of managing a network element, as claimed, comprising:

assessing a USB port on a network element (see column 19, lines 6-10, describing a computing device (i.e. a computer connected to the network (see column 8, lines 53-54) is considered the network element) managed by an externally located device coupled through USB); and

transferring management information over the USB port (see column 19, lines 6-10, where managing a repair process on the computing device implies transferring management information such as initiating the repair process on the computer device).

As per claim 19, Largman further discloses that the management information comprises a software image to be loaded onto the network element (see column 5, lines 56-63).

As per claim 21, Largman further discloses that the new software image is downloaded from a centralized location accessible to multiple network elements (see column 16, lines 24-28), and wherein the new software image upgrades the existing software with new software containing new features (see column 27, lines 54-60, *describing how a master template maybe updated (i.e. new software with new features)* and column 27, lines 49-53, *where the master template is used to restore the user data storage device, but if the master template was updated then the restoration would also include the new updated software).*

As per claim 22, Largman further discloses that the new software image is downloaded from a centralized location accessible to multiple network elements (see column 16, lines 24-28), and where the

new software image is configured to upgrade the existing software with a corrected version of the existing software (see column 5, lines 56-63).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-2,4-10,16,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Largman et al. (US 7,137,034), herein referred to as Largman, and further in view of Agnihotri et al. (US 7,137,034), herein referred to as Agnihotri.

As per claim 1, Largman discloses a network element, as claimed, comprising:

a first processor supporting a first processing environment (see Fig. 1, shows [CPU 10], supporting a processing environment including volatile memory [11] and peripheral controller [17] and boot data store [12] and column 4, lines 39-44 describing the first processing environment computer [1]);

an intelligent interface between the first processing environment and a management device external to the network element (see column 19, lines 6-10, where a repair process may be initiated or managed by an externally located device, and the repair process is performed by the intelligent interface discussed below implying that the intelligent interface is between the management device and computer [1] (i.e. first processing environment)), said intelligent interface comprising a second processor supporting a second processing environment independent of the first processing environment (see Fig. 1, showing how switches [19] and [13] provide an interface that has a microcontroller [1A] (i.e. second processor) supporting the environment of 12 and template data store [14] and see column 4, lines 48-52, describing how the data store [12] may be made accessible to computer [1] and data store [14] inaccessible to computer [1] implying two separate independent environments),

an internal interface enabling the first processing environment to be accessed from the second processing environment (see column 5, lines 39-55, *describing how an internal interface allows the second processing environment including the template data store [14] to copy software to the first processing environment including boot data store [12] by switching to repair mode and having the computer [1] boot from the template boot drive*).

Although the system disclosed by Largman shows substantial features of the claimed invention (discussed above), it fails to disclose enabling the second processing environment to be accessed from the management device external to the network element.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Largman, as evidenced by Agnihotri.

In an analogous art, Agnihotri discloses integrating device management applications into a host system of a network for centralized remote device management of remote network devices on network and a discovery interface for identifying remote network devices on a network (see Abstract). Agnihotri further discloses a management device external to a network element (see Fig. 1, *showing a management device [12] external to a network element [16]*) that provides an processing environment to be accessed from the management device external to the network element (see column 1, lines 45-51 and lines 59-63). *Given that the intelligent interface provides the switching between data store [12] and [14] to copy software to the first processing environment as discussed above, it would be obvious that the intelligent interface would be between the first processing environment and the management device in order to allow the management device to command the second processing environment of the intelligent interface by activating the switches to perform the copying and booting.*

Given the teaching of Agnihotri, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Largman by employing an external management device, such as disclosed by Agnihotri, in order to perform a remote function such as rebooting remote PCs on the network or monitor PC health (see Agnihotri column 1, lines 60-63).

As per claim 2, Largman further discloses that the intelligent interface further comprises a memory (see column 4, lines 23-34, *where a microcontroller inherently comprises memory registers*).

As per claim 4, Largman further discloses that the second processor comprises control logic enables a new software image to be loaded onto the intelligent interface, said new software image to be used to configure the first processing environment (see column 27, lines 34-37 and lines 54-60, *where the master template provides the data store template [14] with the copy that is used to repair data store [12]*).

As per claim 5, Largman further discloses that the intelligent interface comprises a memory, and wherein the new software image is stored in said memory (see column 27, lines 54-60, *where updating the master template inherently includes memory to store the master template*).

As per claim 6, Agnihotri further discloses that the second processor comprises control logic enables information related to an operational condition of the first processor to be collected over the internal interface and transmitted over the external interface (see column 1, lines 60-64).

As per claim 7, Agnihotri further discloses that the operational condition comprises at least one of Management Information Base values, logging information, and operational parameters (see column 1, lines 60-64).

As per claim 8, Largman further discloses that the second processor comprises control logic enabling diagnostic checks to be run on the first processing environment (see column 6, lines 39-43).

As per claim 9, Largman further discloses that the second processor comprises control logic enabling modifications to be made to the first processing environment over the internal interface (see column 6, lines 39-43).

As per claim 10, Largman further discloses that the external interface operates utilizing at least one of the Universal Serial Bus (USB) standards (see column 19, lines 6-10).

As per claim 16, Agnihotri further discloses enabling at least one of files and MIB information to be transmitted from the intelligent management interface to enable a network manager to manage the network element during at least one of a network element boot process and in a network element run-time environment (see column 15, lines 53-63, *describing setting traps to monitor a network devices run-time environment*).

As per claim 20, Agnihotri further discloses that the management information comprises Management Information Base (MIB) values indicative of at least one of performance by the network element and a state of operation of the network element (see column 15, lines 53-63).

14. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Largman in view of Agnihotri as applied to claim 1 above, and further in view of Mumolo et al. ("A Hard Real-Time Kernel for Motorola Microcontrollers").

Although the system disclosed by Largman shows that the first processing environment comprises a first kernel (see column 3, lines 43-57, *where an OS implies a kernel*), and the second processing environment includes a microcontroller (see Fig. 1 [1A]), it fails to disclose that the second processing environment comprises a second kernel.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Largman in view of Agnihotri, as evidenced by Mumolo.

In an analogous art, Mumolo discloses a real-time kernel for running embedded applications on a microcontroller and managing real-time tasks as well as non real-time tasks (see Abstract).

Given the teaching of Mumolo, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Largman in view of Agnihotri by employing a kernel for the second processing environment, such as disclosed by Mumolo, in order to run the applications involved with copying data from template data store [14] to data store [12] of the system described by Largman.

Double Patenting

15. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re*

Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

16. Claims 1 and 18 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/678704. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Instant Application 10/678705	Copending Application No. 10/678704
Claim 1, A network element , comprising: a first processor supporting a first processing environment; an intelligent interface between the first processing environment and a management device external to the network element, said intelligent interface comprising a second processor supporting a second processing environment independent of the first processing environment, an internal interface enabling the first processing environment to be accessed from the second processing environment, and an external interface connected to the second processing environment to enable the second processing environment to be accessed from the management device external to the network element.	Claim 1, A network element , comprising: a network processor equipped with a first processing environment and a plurality of network interfaces to operate on data received from a communications network, and route or switch the data between the network interfaces as the data passes through the network; and an intelligent interface including a second processing environment independent of the first processing environment of the network processor and capable of booting independent of the first processing environment of the network processor, the intelligent interface thereby being available to control the network element during a boot process of the first processing environment of the network processor, the intelligent interface further being equipped with an external

	communication port configured to interface with external resources using one of the Universal Serial Bus (USB) standards, and an internal port configured to interface with the network processor.
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The copending application does not expressly disclose a management device external to the network element, a second processor, and enabling the first processing environment to be accessed from the second processing environment and enabling the second processing environment to be accessed from the management device external to the network element. However, it does show a second processing environment and the intelligent interface being available to control the network element during a boot process of the first processing environment and interfacing with external resources. At the time of the invention, a person having ordinary skill in the art would have found it obvious to associate an external management device with the external resource taught by the copending application and a second processing environment with a second processor to support that second processing environment. Further, one of ordinary skill in the art would realize that the intelligent interface being available to control the network element during a boot process of the first processing environment would be considered enabling the first processing environment to be accessed from the second processing environment since the intelligent interface is a part of the second processing environment. Finally, since the copending application teaches that the intelligent interface is supposed to interface with an external resource using USB, one of ordinary skill in the art would find it obvious to attach a management device to the second processing environment which includes the intelligent interface via USB, in order to control the boot process performed by the copending application.

Instant Application 10/678705	Copending Application No. 10/678704
Claim 18, A method of managing a network	Claim 1, A network element, comprising:

element, comprising: accessing a USB port on a network element; and transferring management information over the USB port.	a network processor equipped with a first processing environment and a plurality of network interfaces to operate on data received from a communications network, and route or switch the data between the network interfaces as the data passes through the network; and an intelligent interface including a second processing environment independent of the first processing environment of the network processor and capable of booting independent of the first processing environment of the network processor, the intelligent interface thereby being available to control the network element during a boot process of the first processing environment of the network processor, the intelligent interface further being equipped with an external communication port configured to interface with external resources using one of the Universal Serial Bus (USB) standards, and an internal port configured to interface with the network processor.
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The copending application does not expressly state that the external resource using USB is for managing the network element. However, at the time of the invention, a person having ordinary skill in the art would have it obvious that providing an external communication port to interface with external resources would be for managing the intelligent interface capable of booting the network processor since it would be advantageous to give the command to boot from a remote location such as from a workstation in a network operating center.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

17. Claim 11 is provisionally rejected on the ground of nonstatutory double patenting over claim 1 of copending Application No. 10/678704. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows:

Instant Application 10/678705	Copending Application No. 10/678704
Claim 11, An intelligent management interface for a network element, comprising: an independent operating environment configured to enable the intelligent management interface to be active during a boot process of the network element; and intelligence configured to enable the intelligent management interface to take action on the network element.	Claim 1, A network element, comprising: a network processor equipped with a first processing environment and a plurality of network interfaces to operate on data received from a communications network, and route or switch the data between the network interfaces as the data passes through the network; and an intelligent interface including a second processing environment independent of the first processing environment of the network processor and capable of booting independent of the first processing environment of the network processor, the intelligent interface thereby being available to control the network element during a boot process of the first

	<p>processing environment of the network processor, the intelligent interface further being equipped with an external communication port configured to interface with external resources using one of the Universal Serial Bus (USB) standards, and an internal port configured to interface with the network processor.</p>
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Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J. Chea whose telephone number is 571-272-3951. The examiner can normally be reached on M-F 6:30-4:00 (1st Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Philip J Chea
Examiner
Art Unit 2153

PJC 1/31/08



KRISNA LIM
PRIMARY EXAMINER